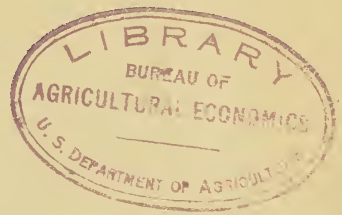


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**Some Problems in Marketing Tomatoes
Grown in the Lower Rio Grande
Valley of Texas**

Issued January 1938



UNITED STATES DEPARTMENT OF AGRICULTURE

Agricultural Adjustment Administration

Division of Marketing and Marketing Agreements

General Crops Section

SOME PROBLEMS IN MARKETING TOMATOES GROWN IN THE LOWER RIO GRANDE VALLEY OF TEXAS

What marketing problems confront tomato growers in the lower Rio Grande Valley of Texas? How can these problems be met and marketing conditions improved?

To help the industry answer these questions the Agricultural Adjustment Administration and other Government agencies, in cooperation with growers and shippers, conducted a study of the situation during the 1937 marketing season.

During the last 20 years tomato production in the Rio Grande Valley and in competing areas has expanded rapidly. Increases in both acreage and production are attributed to: (1) Increasing consumer demand for fresh tomatoes; (2) development of wilt-resistant varieties; (3) reduction in production costs; and (4) discovery about 10 years ago that tomatoes shipped in the "mature green" stage would ripen into edible fruit, making it possible to reduce marketing costs materially.

Tomato production is one of the more important vegetable-growing industries in the lower Rio Grande Valley. Two crops are grown each year—a fall crop that is marketed in November and December, and a spring crop that is marketed from the latter part of April to the first part of June. The spring crop is the more important.

UPWARD TREND IN ACREAGE AND PRODUCTION

The harvested acreage of the spring crop of valley tomatoes increased over 1,000 percent from the 5-year period 1918–22 to the 5-year period 1933–37, rising from an annual average of 1,190 acres to an annual average of 13,220 acres. Annual average production during the same periods increased over 700 percent, from 194,000 lugs to 1,609,000 lugs.

INCREASES IN COMPETING AREAS

Acreage and production of tomatoes increased materially in competing areas, but not so rapidly as in the lower Rio Grande Valley.

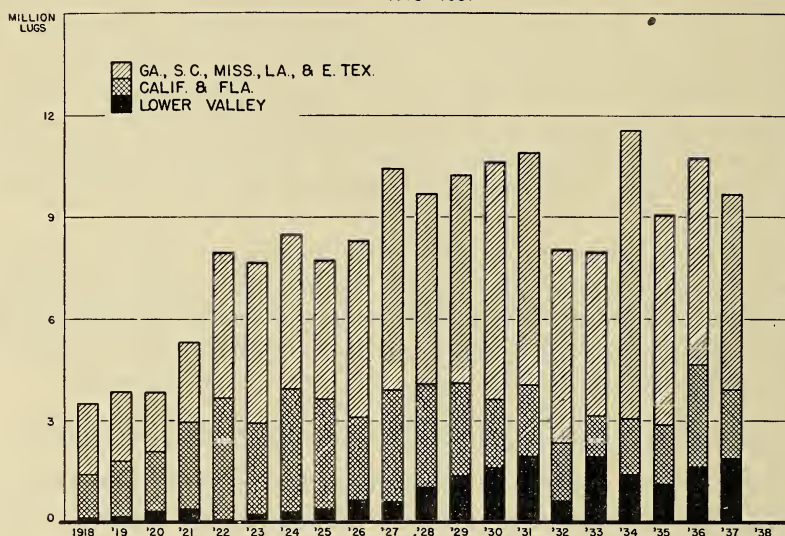
Harvested acreage in Georgia, South Carolina, Mississippi, Louisiana, and in areas of Texas outside of the valley, steadily increased from an annual average of 13,864 acres during the 5-year period 1918–22 to an average of 44,540 acres in the period 1933–37.

Harvested production in these competing areas increased from an annual average of 2,506,000 lugs in the 5-year period 1918-22 to 4,617,000 lugs in the 1923-27 period, and climbed to 6,261,000 lugs in the 1933-37 period.

In California and Florida spring-tomato acreage steadily increased from 7,200 acres in 1918 to 36,050 acres in 1924, declined irregularly to 11,400 acres in 1933, increased to 22,800 acres in 1936, and dropped to 14,300 acres in 1937.

In these two States harvested production increased from 1,300,000 lugs in 1918 to a peak of 4,712,000 lugs in 1923, then dropped off to a low of 1,206,000 lugs in 1933. Since 1933 production has been increasing, reaching 3,013,000 lugs in 1936. Production in 1937 fell off to 2,038,000 lugs largely because of unfavorable growing conditions.

PRODUCTION OF SPRING TOMATOES FOR MARKET
LOWER RIO GRANDE VALLEY AND COMPETING AREAS
1918-1937



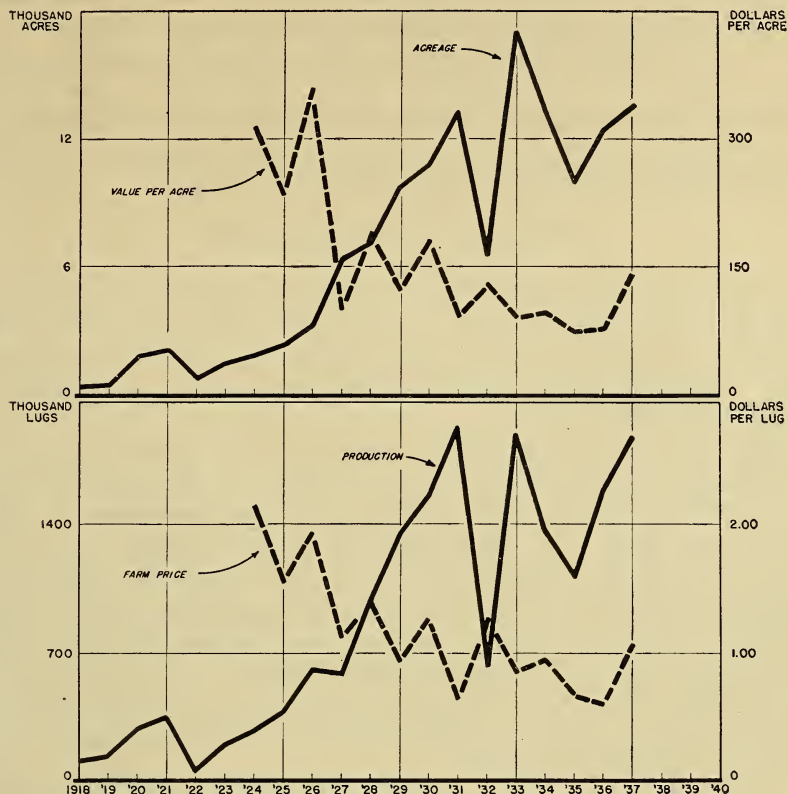
The combined production of tomatoes in the lower Rio Grande Valley and in competing areas increased sharply from 1918 to 1931. Since 1931 the direction of the trend is indefinite because of wide fluctuations in production.

LOWER AVERAGE RETURNS TO GROWERS

As both production and acreage increased the farm price of tomatoes declined in the lower Rio Grande Valley and in competing areas. The farm price of tomatoes grown in the lower Rio Grande Valley, figures for which first became available in 1924, declined from \$2.13 per lug in 1924 to 61 cents per lug in 1936, then went up to \$1.05 per lug in 1937. During the 6 years, 1924-29, prices averaged \$1.50 per lug.

The declining trend in prices resulted in lowering the farm value of an acre of tomatoes. The farm value per acre of tomatoes in the lower Rio Grande Valley was \$311 in 1924. In 1936 it was \$79, and in 1937 it went up to \$140. During the 6 years, 1924-29, farm value averaged \$219 per acre.

ACREAGE, PRODUCTION, FARM PRICE, AND FARM VALUE PER ACRE OF
TEXAS LOWER RIO GRANDE VALLEY TOMATOES, EARLY (2)
1918 - 1937



Acreage and production of tomatoes in the lower Rio Grande Valley expanded greatly since 1924, while prices and value per acre declined. Although prices were very low in 1935, acreage and production expanded in 1936. Despite the fact that prices in 1936 were somewhat lower than those in 1935, acreage and production expanded again in 1937.

SOME PROBLEMS IN THE VALLEY TOMATO INDUSTRY

HARVESTING AND PACKING THE CROP

In the Rio Grande Valley most tomatoes are picked by hired labor paid by the day or by the field box. Because of the difficulty in getting pickers to use care in picking, there is a high percentage of

culls in tomatoes going to packing sheds, and consequently much needless handling which adds to the marketing expense.

Packing houses ordinarily furnish field boxes for hauling bulk tomatoes from the field to the packing shed. This service to growers apparently is an outgrowth of the highly competitive nature of the tomato packing and shipping business. Because growers are not charged with the field boxes taken from the packing house, a considerable number of the boxes are lost each season. Although the monetary loss involved amounts to very little considering the valley tomato deal as a whole, whatever loss there is seems needless.

Central packing sheds located at various shipping points pack at least 90 percent of the tomatoes in the lower Rio Grande Valley. For the most part these central packing houses are well equipped and efficiently operated. A number of packers operate on contracts with shippers and are paid on a toll or cost-plus basis.

NEED FOR STANDARDIZATION

While tomatoes are generally graded and packed to meet Federal standard specifications, there is a real need in the valley for standardization, within practical limits, of the net contents of packages. Such a standardization would facilitate sales and would ultimately benefit growers.

Reports indicate that packers operating on a contract basis with a shipper at a fixed charge per package are largely responsible for slack packs. Investigations revealed much less complaint of slack pack at the New York and the Chicago markets in cars which were packed by shippers themselves than in the case of cars packed by contract packers. During the 1937 spring season approximately three-fourths of the carlot shipments of tomatoes from the lower Rio Grande Valley were Federal-State inspected. In some instances, particularly where the shipper and buyer have been dealing with each other for a number of years, trading is done on the basis of the shipper's statement of grade.

Practically all of the tomatoes for shipment as "green wraps" are packed in the standard lug which is billed at 33 pounds, the net weight varying according to the size of the tomatoes, the amount of bulge, and the type of pack which may be a straight pack, an extra row pack, an extra row bridge pack, and a straight bridge pack.

Packing the tomatoes so that they cause a bulge in the center of the lug is a common practice in all of the early-tomato-producing districts. This practice has been forced on the industry largely as a result of competition among individual shippers in their efforts to appeal to buyers.

While some bulge to the lug may be desirable, the tendency has been toward an excessive bulge which frequently results in consid-

erable bruising. Shipments from the valley showing a bulge higher than the top of the 1-inch cleat allowed on top of the lug are now subject to a 20-percent additional freight charge. Although this regulation was not directed at the bulge pack as such it will have the effect of preventing excessive bulge. Most shippers in the area indicate that they have no difficulty in putting up full-weight packs under this regulation.

Tomatoes are sorted into various sizes by hand or by machine before they are packed in lugs. This makes it possible to put tomatoes of the same size into a tight, full-weight package and enables sales of the varying sizes of tomatoes demanded by trade outlets.

WIDE DIFFERENCES IN TOMATO VARIETIES AND TYPES

Growers in the lower Rio Grande Valley have had considerable difficulty in obtaining a variety of tomatoes which would meet market requirements and at the same time be early, prolific, and relatively free from grade-lowering defects. Some of this difficulty arises from the wide variations in types of soil on which tomatoes are grown. Varieties which do well on heavy clay soils may have serious shortcomings when grown on light sandy soils. A mixture of varieties and types of tomatoes has resulted from these variations. The Clark's Early, a flat-type variety, is not desirable from a market standpoint, selling at a discount under the globe- and semi-globe-type varieties. Nevertheless, it is grown on the sandy soils. Because of its earliness and high-yielding qualities growers are able to net greater returns from this variety than from most other varieties. On the heavier soils the flat-type varieties have given way to globe- and semi-globe-type varieties, such as Marglobe, Grothen's Globe, Stokesdale, and Rutgers, which are more desirable from a market standpoint. Under conditions in the valley there appears to be a tendency for the globe and semi-globe varieties to flatten out, i. e., run out, indicating the necessity for constant selection of seed stock to maintain the desired shape.

SUPPLY AND DEMAND FIX PRICES

Many growers believe that the prices they receive do not always reflect true supply-and-demand conditions, and that shippers often set prices arbitrarily. This belief is largely responsible for attempts by growers to bring about what is commonly called "price stabilization."

The relationship between total supplies of tomatoes and the prices received by valley growers is rather complicated and indirect. Terminal market prices reflect changes in total supplies available or to be available in these markets. Because shipments from the valley

require from 4 to 7 days to reach the principal terminal markets, f. o. b. prices and grower prices are determined by prices that are expected to be in effect when shipments will arrive rather than by current prices in these markets at the time the shipment is started. In any one season total shipments of tomatoes from the valley and competing areas, and their quality, are the most important factors which determine changes in market prices. From one season to another changes in demand conditions also are important.

EFFECT OF SHIPMENTS ON PRICES

The effect of these factors on returns to valley growers is indicated by a comparison of shipments and prices during the 1936 and 1937 seasons. Carlot shipments from the valley to June 6, 1937, were 27 percent greater than shipments up to the same date in 1936, increasing from 1,980 cars to 2,519 cars. During the same period shipments and imports from competing areas were 22 percent less in 1937 than in 1936, decreasing from 5,381 cars to 4,222 cars. The net reduction of 620 cars in total supplies brought about by smaller total shipments from competing areas, together with improved demand conditions, was reflected in a substantial increase in prices to valley growers. During the 1936 season the price to growers averaged 61 cents per lug, compared to an average of \$1.05 per lug in the 1937, season when total shipments were smaller.

Differentials between grower prices and f. o. b. cash track prices tended to remain relatively constant in a particular season, as indicated by a study of prices for the 1936 and 1937 seasons. These differentials, however, do not remain constant from season to season. During the 1936 season weekly cash track prices at valley shipping points averaged 54 cents per lug above prices to valley growers, while in 1937 they averaged 74 cents per lug above grower prices.

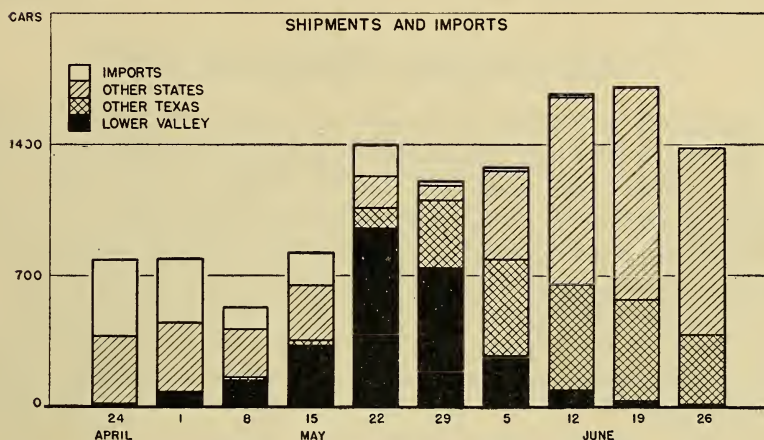
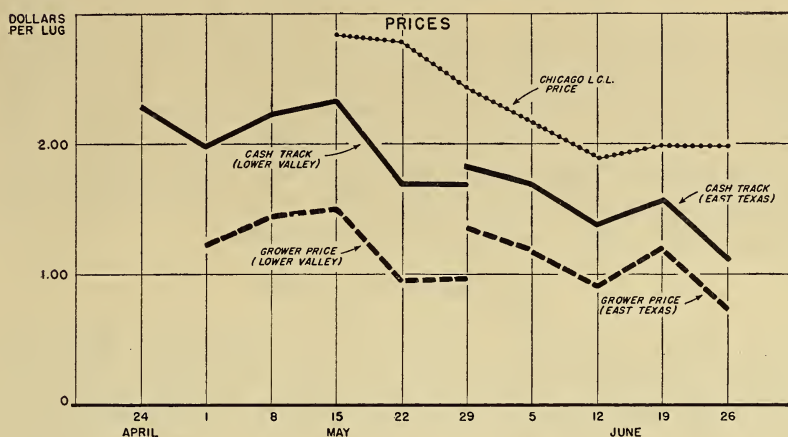
RELATION BETWEEN GRADES, SIZES, AND PRICES

In most seasons tomatoes shipped from the valley are largely of the U. S. No. 1 grade. Because of the relatively high tomato prices in the 1937 season, a considerable number of cars of mixed U. S. No. 1 and No. 2 grades and straight No. 2 grades were shipped. Of the 1,987 cars of valley tomatoes inspected by the Federal-State inspection service in the 1937 spring season, 178 cars were mixed U. S. No. 1 and No. 2, 117 cars were U. S. No. 2, and 171 cars were intermediate in grade between U. S. No. 1 and No. 2. The remaining 1,521 cars were of U. S. No. 1 grade.

A few reports on scattered sales of U. S. No. 2 valley tomatoes at New York in May 1937 indicated that this grade sold at from 75

cents to \$1.25 per lug under the U. S. No. 1 grade of the same size. Although tomatoes of the same sizes, 6 x 7's and 7 x 7's, sell at a discount in the terminal markets as compared to 6 x 6's and larger, there is no specific discount made in prices to growers for these small sizes.

WEEKLY PRICES OF TEXAS TOMATOES AND CARLOT SHIPMENTS AND IMPORTS OF TOMATOES APRIL 24-JUNE 26, 1937



Prices received for tomatoes in the 1937 spring season by lower Rio Grande Valley growers remained at comparatively high levels throughout the season because of an unusually small volume of shipments from competing areas. The margins between weekly f. o. b. prices and prices received by growers were substantially greater than in the 1936 season. As in 1936, margins between f. o. b. prices and grower prices at valley points were greater than at east Texas points.

In wholesale markets sizes 6 x 6's and larger usually sell at the same price. During the 1937 season the usual discount under prices for sizes 6 x 6's and larger was 25 cents per lug for sizes 6 x 7's and 50

cents per lug for sizes 7 x 7's. These discounts may vary from season to season, depending on relative supplies of the different sizes and other market factors.

Shippers have indicated that at certain times during the season prices offered to growers were influenced to some extent by the expected size turn-out of a given lot of tomatoes. Shippers are usually able to include in a car a small proportion of lugs of the small sizes without a price discount. As a result, when the crop is running mostly to medium to large sizes, 6 x 6's and larger, there may be no discount in the price paid growers for small sizes. As the picking season progresses the proportion of small sizes is greater, and shippers are forced to give discounts on the small sizes and are consequently forced to lower prices offered growers. The extent to which prices are lower as the proportion of the small sizes increases cannot be determined, since no specific discount is made.

MARKET PREFERENCES

In a number of markets, tomatoes from Florida and Mexico are generally preferred to those from the lower Rio Grande Valley and will bring higher prices than valley tomatoes. This difference in price may be as much as \$1 per lug, although at times there may be no difference.

WHAT RETAILERS AND RECEIVERS SAY

During the 1937 season an effort was made to learn why the trade in New York City and Chicago preferred tomatoes from Florida and Mexico rather than those from the lower Rio Grande Valley. Selected retailers in each city reported on their experiences in handling tomatoes from the different areas. The most frequent criticisms from these retailers against lower Rio Grande Valley tomatoes were:

1. The extra-row pack, common in the valley, is not desirable.
2. Packs of valley tomatoes are frequently slack.
3. Valley packs frequently contain tomatoes of different varieties and shapes.
4. Valley tomatoes are sometimes very irregular in size.
5. Early-season shipments from the valley frequently contain immature tomatoes which do not ripen.
6. Valley tomatoes are inclined to ripen soft.

Similar criticisms were made by wholesale receivers in these markets. Tomato repackers in certain terminal markets indicated that supplies from the lower valley were not generally bought by repackers because their defective characteristics do not allow profitable repacking. In these markets repackers used tomatoes from Florida and Mexico.

WHAT VALLEY SHIPPERS SAY

Reports from shippers in the valley during the 1937 season indicate that there is justification for market discrimination against some packs of valley tomatoes. These reports also indicate that in several respects there has been considerable improvement in the quality of the pack in recent years through more widespread production of desirable market varieties of tomatoes.

Most of the shippers assert that claims that early season shipments frequently contain heavy proportions of immature green tomatoes are greatly exaggerated. Supporting this assertion is the fact that practically all inspection certificates covering shipments of tomatoes from the lower Rio Grande Valley during the 1937 season stated that the tomatoes inspected were mature green. In only a few instances was immaturity one of the grade defects listed. Many inspection certificates carried the notation "grade defects with tolerance" without any specific mention of the type of defect, and in such cases shipments may have contained immature tomatoes. Since immaturity can be determined with a fair degree of accuracy in routine inspection for certain other grade defects such as puff, it is not likely that inspectors would consistently fail to list immaturity as a grade defect if it were prevalent.

NEED FOR UNDERSTANDING PROBLEMS

Before a sound program for improving marketing conditions and returns to tomato growers can be developed, it is essential that growers in the industry understand the forces which determine their prices. Many of the growers' past efforts to improve marketing conditions have failed, largely because they were based on false conclusions about the forces that establish prices. One of the most common false impressions regarding grower prices is that middlemen set both buying and selling prices.

Control of a part or even all of the marketing of a product does not give complete control over price. In the final analysis, consumers set the price at which they are willing to buy a given quantity of tomatoes. Prices which consumers will pay for tomatoes are influenced on the supply side by the quantity and quality of the product offered for sale, and on the demand side by the consumer's desire for the commodity, his purchasing power, and prices of substitute products.

If producers of tomatoes sold directly to consumers their gross returns would be determined by the quantities sold, multiplied by the price consumers were willing to pay, and their gross returns at point of production would be the gross returns at point of consump-

tion, less all charges for marketing the product. Returns to producers in the valley who market "pinks" directly to consumers in nearby Texas cities are determined in this manner.

The produce business is highly competitive and a single dealer cannot exert any significant influence on either his buying or selling price. If the buying price of one shipper is out of line with that which other shippers are paying, it will not remain so for long; if too low, the shipper will lose his proportionate volume. If marketing margins are wider than they should be, it is because some services are not efficiently performed.

SOUND PRINCIPLES MUST GOVERN INDUSTRY PROGRAMS

One of the principal objectives in past cooperative efforts of vegetable growers in the lower Rio Grande Valley to improve marketing conditions has been price stabilization at high levels. Repeated attempts have been made to establish and maintain large-scale cooperatives which would give growers substantial monopoly control over the marketing of the crop. Prior to 1937 five such cooperatives have been established and each of these lost grower support and failed, largely because of promises made by promoters which could not be realized.

Despite the failure of past cooperative marketing efforts in the lower Rio Grande Valley, the various attempts at cooperation have yielded some benefits to the industry. In these efforts improvement in grade and pack was stressed as a means of improving grower returns. Also, the various cooperatives, even though they failed from a business standpoint, probably have had the effect of improving the efficiency of private shippers.

POSSIBILITY OF ADJUSTING SHIPMENTS

When marketing conditions are demoralized growers are affected more adversely than are shippers or others in the industry. Therefore, growers have attempted to obtain a greater control over market prices by adjusting shipments to demand. This type of adjustment under a Federal marketing-agreement program is known as volume regulation. Regulations of this type, designed to maintain or restore stability in marketing conditions, may vary in type. Shipments may be regulated for a part or all of the marketing season. In some cases it may be practical to withhold all shipments during a given period. The particular type of volume regulation which may be used most advantageously depends on many factors, including the nature of the commodity and the character of the market organization.

FACTORS IN CONTROLLING VOLUMES SHIPPED

It appears that a number of times in the past valley tomato growers would have benefited from controlling their shipments if similar regulations had been in effect in competing areas which ship at the same time. If, however, control over shipments had been confined to any one area having only a portion of the supply, it would not follow that the income to growers in that area would have been improved. Under such conditions competing areas without such regulations would have derived most of the benefit from any improvement in prices. In this connection it is well to note that during the valley shipping season shipments of tomatoes from other areas frequently equal or exceed those from the valley.

FACTORS IN CONTROLLING GRADES AND SIZES SHIPPED

The lower Rio Grande Valley tomato industry may be able to improve marketing conditions and returns to growers by regulating shipments of the inferior grades and sizes, even though such regulations are not in effect in competing areas. Regulating interstate shipments of the inferior grades or sizes under a Federal marketing-agreement program might be expected to reduce losses arising from "red ink" sales and to improve grower returns in periods when market conditions are demoralized. When marketing conditions are bad, local buyers often refuse to buy the inferior grades or sizes, and shippers frequently resort to consignment sales. When the market becomes stagnant, shipments of the lower grades or small sizes frequently do not return the cash costs of marketing.

For some time many growers have indicated that selling cull tomatoes in nearby Texas markets was poor policy for growers as a group. Growers usually receive very low prices for cull tomatoes. It is entirely possible that the increased income from shipments of the higher grades of tomatoes which might result from regulating cull shipments would much more than offset any apparent reduction in income which might result from limiting cull shipments.

Regulation of the intrastate movement of cull tomatoes during the period when the lower Rio Grande Valley is the only important shipping area in the State would supplement a Federal marketing-agreement program and should assist in improving marketing conditions for growers.

Regulation of the grades and sizes of tomatoes shipped from the valley probably would be most effective during the early part of the shipping season before the producing districts in east Texas—Yoakum, Livingston, and Jacksonville—begin shipping.

Both intrastate and interstate regulation of shipments of the inferior grades or sizes would need to be sufficiently flexible not to work a hardship on individual growers or groups of growers. In practice the problem of equalizing the benefits and burdens of such a program can be met by exemption certificates or by varying the regulations to conform to differences between districts.

UP TO BOTH GROWERS AND SHIPPERS

General improvement in the market type and quality of valley tomatoes, in line with the trend in recent years, would tend to broaden the market outlet and improve prices. Such a program, however, is a long-time one. With the trend toward increasing production in the valley and in certain competing areas, quality considerations are becoming more important. Improvement in market type would place the valley in a better position to compete with other producing areas. Additional gains could be expected from a program which would adjust shipments to a volume more nearly in keeping with what the markets require.

Development of any program for improving marketing conditions and returns to tomato growers is a problem which concerns both producers and shippers. The willingness of both groups to work together toward a common objective, in the long run, determines the degree of success which may be achieved.

